

**AMENDMENTS TO THE DRAWINGS:**

Figs. 6 and 7 have been amended to include corrected reference numerals. Figs. 9 and 11 have been amended to include a drawing of a transfer contact. Figs. 7-13 have been amended to include the legend "Prior Art". A total of eight (8) replacement sheets are included.

## **REMARKS**

### **I. Introduction**

In response to the pending Office Action, Applicants have added new claims 8-14 in order to further clarify the subject matter of the present invention and to overcome § 112 rejections and have cancelled claims 1-7, without prejudice. Support for new claim 8 may be found, for example, in the first embodiment in paragraphs [0041]-[0061] of the specification. Support for new claims 9 and 14 may be found, for example, in Fig. 2 of the drawings. Support for new claim 10 may be found, for example, in Fig. 1 and paragraphs [0048]-[0052] and [0060] of the specification. Support for new claims 11-12 may be found, for example, in Figs. 1, 3 and 4 of the drawings. Support for new claim 13 may be found, for example, in the second embodiment in paragraphs [0062]-[0068] of the specification. In addition, the drawings have been amended to overcome objections under 37 CFR § 1.84(p)(5) and to indicate prior art. The specification has been amended to correct inadvertent errors. The Title has been amended to be clearly indicative of the invention. No new matter has been added.

Applicants respectfully submit that all pending claims are patentable over the cited prior art for the reasons set forth below.

### **II. The Rejection Of Claims 1-7 Under 35 U.S.C. § 102 And 103**

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Guidash (USP No. 6,657,665). In addition, claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Guidash in view of Lee et al. (US 2004/0140564). Claims 1-7 have been cancelled and new claims 8-14 have been added in order to overcome the above cited rejections.

Applicants respectfully submit that Guidash and Lee fail to anticipate or render obvious the new pending claims for at least the following reasons.

With regard to the present invention, new claim 8 recites a solid-state imaging apparatus comprising: a substrate; a first pixel formed on the substrate including a first photodiode, a first transfer transistor and a first floating diffusion and a second pixel formed on the substrate adjacent to the first pixel including a second photodiode, a second transfer transistor and a second floating diffusion; wherein a distance and direction from the first photodiode to the first floating diffusion are substantially equal to a distance and direction from the second photodiode to the second floating diffusion.

One feature of the present invention is that the distance and direction from the first photodiode to the first floating diffusion is substantially equal to the distance and direction from the second photodiode to the second floating diffusion. As a result of this feature, there is no difference between the incident light that enters into the first and second photodiodes, and therefore, the sensitivity of the first pixel and the second pixel is more accurate.

In contrast to the present invention, at a minimum, both Guidash and Lee fail to disclose this limitation. As can be seen in Fig. 4 of Guidash, the first floating diffusion FDa (25) is located to the upper right of the first photo diode PDa (12), whereas the second floating diffusion FDb (25) is located to the lower right of the second photo diode PDb (12). Furthermore, Lee is silent with respect to floating diffusions. As such, Guidash and Lee do not disclose that a distance and direction from the first photodiode to the first floating diffusion are almost the same as a distance and direction from the second photodiode to the second floating diffusion.

However, as can be seen in Fig. 1 of the present invention, for both the first and second photodiodes 201 (located in pixels 230 and 231, respectively), the floating diffusions 206 are

located on the bottom portion of each of the photodiodes at a substantially equal direction and distance.

Anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). As, at a minimum, Guidash and Lee do not disclose a first transfer transistor and a first floating diffusion and a second pixel formed on the substrate adjacent to the first pixel including a second photodiode, a second transfer transistor and a second floating diffusion; wherein a distance and direction from the first photodiode to the first floating diffusion are substantially equal to a distance and direction from the second photodiode to the second floating diffusion, it is clear that Guidash and Lee do not anticipate, nor render obvious, claim 8, or any claims dependent thereon.

**IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as new claim 8 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**V. Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

**Application No.: 10/574,775**

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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